Claims

- 1. A modified asialo-interferon, comprising an asialo-interferon that is conjugated to a water-soluble polymer having an average molecular weight of approximately 1,000 to 60,000 daltons.
- 2. The modified asialo-interferon of claim 1, wherein said water-soluble polymer has an average molecular weight of approximately 10,000 to 20,000 daltons.
- 3. The modified asialo-interferon of claim 1, wherein said modified asialo-interferon is a pegylated asialo-interferon
- 4. The modified asialo-interferon of claim 3, wherein said pegylated asialo-interferon is pegylated at a cysteine, lysine, serine, threonine, tyrosine, aspartic acid, or glutamic acid residue; at a C-terminal carboxyl; or at an N-terminal amine.
- 5. The modified asialo-interferon of claim 4, wherein said pegylated asialo-interferon is pegylated at a cysteine residue.
- 6. The modified asialo-interferon of claim 4, wherein said pegylated asialo-interferon is pegylated at a lysine residue.
- 7. The modified asialo-interferon of claim 1, wherein said modified asialo-interferon is a pypylated asialo-interferon.
- 8. The modified asialo-interferon of claim 7, wherein said pvpylated asialo-interferon is pvpylated at a cysteine, lysine, serine, threonine, tyrosine, aspartic acid, or glutamic acid residue; at a C-terminal carboxyl; or at an N-terminal amine.

- 9. The modified asialo-interferon of claim 8, wherein said pypylated asialo-interferon is pypylated at a cysteine residue.
- 10. The modified asialo-interferon of claim 8, wherein said pypylated asialo-interferon is pypylated at a lysine residue.
- 11. The modified asialo-interferon of claim 1, wherein said modified asialo-interferon comprises an asialo-interferon- α , an asialo-interferon- β , or an asialo-interferon- γ .
- 12. The modified asialo-interferon of claim 11, wherein said asialo-interferon is a human asialo-interferon.
- 13. The modified asialo-interferon of claim 1, wherein the polypeptide sequence of said asialo-interferon comprises an additional cysteine residue compared to the sequence of mature interferon polypeptide.
- 14. The modified asialo-interferon of claim 13, wherein said cysteine replaces a threonine or serine residue of said mature interferon polypeptide.
- 15. A pharmaceutical composition comprising a modified asialo-interferon of claim 1, and a pharmaceutically acceptable excipient.
- 16. The pharmaceutical composition of claim 15, wherein said water-soluble polymer having an average molecular weight of approximately 1,000 to 60,000 daltons.

- 17. The pharmaceutical composition of claim 15, wherein said water-soluble polymer having an average molecular weight of approximately 10,000 to 20,000 daltons.
- 18. The pharmaceutical composition of claim 15, wherein said modified asialo-interferon is a pegylated asialo-interferon.
- 19. The pharmaceutical composition of claim 15, wherein said modified asialo-interferon is a pypylated asialo-interferon.
- 20. The pharmaceutical composition of claim 15, wherein said modified asialo-interferon comprises an asialo-interferon- α , an asialo-interferon- β , or an asialo-interferon- γ .
- 21. The pharmaceutical composition of claim 15, wherein said modified asialo-interferon is a modified human asialo-interferon.
- 22. A method of treating a patient with a hepatic disorder comprising administering to said patient a therapeutically effective amount of a pharmaceutical composition comprising a mammalian asialo-interferon conjugated to a water-soluble polymer having an average molecular weight of approximately 1,000 to 60,000 daltons.
- 23. The method of claim 22, wherein said modified asialo-interferon is a pegylated asialo-interferon.
- 24. The method of claim 22, wherein said modified asialo-interferon is a pypylated asialo-interferon.

- 25. The method of claim 22, wherein said hepatic disorder is viral hepatitis, hepatic cancer, or fibrosis of the liver.
- 26. The method of claim 22, wherein said patient is infected with a hepatitis B virus or a hepatitis C virus.
- 27. The method of claim 22, wherein said hepatic disorder is diffuse-type hepatocellular carcinoma, febrile-type hepatocellular carcinoma, and cholestatic hepatocellular carcinoma, hepatoblastoma, hepatoid adenocarcinoma, and focal nodular hyperplasia.
- 28. The method of claim 22, wherein said modified asialo-interferon comprises an asialo-interferon- α , an asialo-interferon- β , or an asialo-interferon- γ .
- 29. The method of claim 28, wherein said asialo-interferon is a human asialo-interferon.